



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Nathan G. Clark, et al.

Attorney Docket: 990471U2

Serial No.: 09/810,792

Group Art Unit: 3641

Filed: March 16, 2001

Examiner: Nelson, Peter A.

For: **OIL WELL PERFORATOR LINER WITH
HIGH PROPORTION OF HEAVY METAL**

**PRELIMINARY AMENDMENT AND REQUEST FOR
CONTINUED EXAMINATION**

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Sir:

This Preliminary Amendment is filed in response to the Final Office Action of March 25, 2003 and the Advisory Action of June 3, 2003. The amendments submitted with the previous response were not entered and are presented here again. Please amend the application as follows:

In the Claims:

Claim 1. (Currently Amended) A shaped charge comprising:
a casing for a shaped charge;
an explosive material disposed within the casing having a cavity formed therein; and
a liner disposed within the cavity formed of a mixture of powdered heavy metal and
powdered binder metal wherein
the percentage of heavy metal in the mixture is within a range of approximately
91.0% to 99.98% by weight.

Claim 2. (Previously Amended) A shaped charge according to claim 1 wherein
the heavy metal powder is chosen from the group consisting of tungsten, tantalum,
gold, platinum, or any mixture thereof.

Claim 3. (Previously Amended) A shaped charge according to claim 1 wherein
the heavy metal consists primarily of tungsten.